

AMENDMENTS TO THE CLAIMS

Listing of Claims:

Claims 1-46 (Canceled).

Claim 47 (Currently Amended): An article of clothing to be worn over a curved body portion, ~~including shirts, pants, jackets, wet suits, knee pads, gloves and aprons;~~ the article including a curved exterior portion formed from flexible and abrasion resistant composite fabric, the composite fabric comprising:

a woven substrate having an abrasion resistance and sufficient flexibility to be conformable to the curved exterior portion of the article from a planar configuration; and
an array of non-overlapping, ~~hard, convex-geometric-shaped, printed-thermoset-resin material~~ guard plates arranged in a pattern, the guard plates being separated by gaps and comprising thermoset polymeric resin, and having an area with major and minor dimensions;
_____ wherein the resin material of the guard plates partially ~~penetrating~~ penetrates into the woven substrate across substantially the entire area of the guard plates to provide a mechanical bond between the guard plates and the substrate to prevent detaching of the guard plates from the substrate when the composite fabric is conformed to the curved state and flexed, ~~having an area parallel to the substrate with a major dimension to minor dimension aspect ratio between 2 and 1,~~
_____ wherein a width of the gaps is between ~~530 mils and 4050 mils~~, a thickness of the guard plates is between 5 and 4020 mils ~~and is less than the lengths of the minor dimensions, the minor dimensions are between 60 and 100 mils, the guard plates are harder than the substrate such that overall flexibility of the composite fabric is determined by the flexibility of the substrate and the distances between the guard plates, and~~
_____ wherein the array of ~~plates~~ guard plates are provided such that the overall abrasion resistance of the composite fabric is at least 10 times greater than the abrasion resistance of the substrate.

Claim 48 - 55 (Cancelled).

Claim 56 (Currently Amended): The article of clothing of claim 47, wherein the ~~polymer~~ guard plates comprise heat resistant material.

Claim 57 (Currently Amended): The article of clothing of claim 47, ~~and further including wherein the guard plates comprise~~ abrasion resistant additive material ~~in the resin guard plates.~~

Claims 58-65 (Canceled).

Claim 66 (Currently Amended): The article of clothing of claim 47, wherein the width of the gaps is between ~~1335~~ and ~~4045~~ mils.

Claim 67 (Cancelled).

Claim 68 (Currently Amended): The article of clothing of claim 47, wherein the width of the gaps is between ~~538~~ and ~~2042~~ mils.

Claim 69 (Cancelled).

Claim 70 (New): The article of clothing of claim 47, wherein the guard plates have a hardness of approximately 80 Shore D.

Claim 71 (New): The article of clothing of claim 47, wherein the article comprises one of pant, jacket, wet suit, knee pad, glove or apron.

Claim 72 (New): The article of clothing of claim 47, wherein the thermoset polymeric resin comprises a thermoset epoxy resin.

Claim 73 (New): The article of clothing of claim 47, wherein the guard plates have a tensile strength greater than 100 kgf/cm².

Claim 74 (New): The article of clothing of claim 57, wherein the additive material comprises one or more of alumina particles, titanium particles, or ceramic beads.

Claim 75 (New): The article of clothing of claim 47, wherein the woven substrate has a thickness between 0.5 and 2 millimeters.

Claim 76 (New): The article of clothing of claim 47, wherein the thickness of the guard plates is between 5 and 20 mils.

Claim 77 (New): The article of clothing of claim 47, wherein the guard plates have a maximum dimension between 20 and 200 mils.

Claim 78 (New): The article of clothing of claim 47, wherein the overall abrasion resistance of the composite fabric is between approximately 10 and 200 times greater than the abrasion resistance of the substrate.

Claim 79 (New): An article of clothing to be worn over a curved body portion, the article including a curved exterior portion formed from flexible and abrasion resistant composite fabric, the composite fabric comprising:

a woven substrate having an abrasion resistance and sufficient flexibility to be conformable to the curved exterior portion of the article from a planar configuration; and
an array of non-overlapping guard plates arranged in a pattern, the guard plates being separated by gaps and comprising thermoset epoxy resin,

wherein the resin material of the guard plates partially penetrates into the woven substrate across substantially the entire area of the guard plates to provide a mechanical bond between the guard plates and the substrate to prevent detaching of the guard plates from the substrate when the composite fabric is conformed to the curved state and flexed,

wherein a width of the gaps is between 5 and 40 mils, a thickness of the guard plates is between 5 and 40 mils,

wherein the guard plates have a maximum dimension between 20 and 200 mils, and the guard plates are harder than the substrate,

wherein the array of plates guard plates are provided such that the overall abrasion resistance of the composite fabric is at least 10 times greater than the abrasion resistance of the substrate, and

wherein the article comprises one of pant, jacket, wet suit, knee pad, glove or apron.

Claim 80 (New): The article of clothing of claim 79, wherein the guard plates have a hardness of approximately 80 Shore D.

Claim 81 (New): The article of clothing of claim 79, wherein the substrate has a thickness between 0.5 to 2 millimeters.